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PTO/SB/21 (08-03)

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Total Number of Pages in This Submission

8

Application Number	10/740010
Filing Date	12 19 03
First Named Inventor	BRIAN THELEN
Art Unit	3611
Examiner Name	MR. DAN DUPUMPO
Attorney Docket Number	

ENCLOSURES (Check all that apply)

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Date	JULY 19, 2004

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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

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of

Complete if Known

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U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
		US- 5,860,659	01-19-1999	MICHAEL E. HART	ABSTRACT
		US- 4,253,679	03-03-1981	FRANK SARGENT	COL 1, LINES 5-10
		US- 6,341,795 B1	01-29-2002	ROBERT ZERNEL	TITLE
		US- 6,651,996 B1	11-25-2003	MERL ALLEMANG	TITLE
		US- 5,029,740	07-09-1991	GARY COX	ABSTRACT
		US- 4,593,840	06-10-1986	PETER A.C. CHOWN	COL 1, LINES 5-7
		US- 5,826,768	10-27-1998	DOUGLAS GANULO	ABSTRACT
		US- 6,000,594	12-14-1998	THOMAS CHIMENTI	TITLE & ABSTRACT
		US- 6,485,243 B1	11-26-2002	MAGNUS FERMAN	TITLE & ABSTRACT
		US- 5,567,107	10-22-1996	MICHAEL R. BRUNO	COL 1, LINE 15-18
		US- 5,810,542	09-22-1998	JERRY OSTRANDER	ABSTRACT
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FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³ Number ⁴ Kind Code ⁵ (if known)				

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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional). 2 See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 4 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 5 Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. 6 Applicant is to place a check mark here if English language Translation is attached.

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Commentary on Searched Prior Art

Re: Filing Series and Application Number: 10/740010, Date received at USPTO: 121903

This prior art search focused on three primary Classes; 224, 280 and 414. Carts and towing devices are well represented in the prior art. There are myriad examples of specialty carts, trailers, tow bars etc, but this search yielded **no vehicle attachments specifically arranged for towing large residential refuse containers.**

Generally **Class 224** includes **carrier** devices for pivoting, supporting and clamping the unique device itself and/or an associated load. In each of the Class 224 discovered references, when the carrier device is attached to a vehicle and placed into service, a load is ultimately held off the ground and borne by the vehicle.

This invention also varies from the discoveries within prior art of **Class 280, Land vehicles (and Attachments)**, by virtue of the wheeled refuse container being separate from the invention, and merely coupled to a vehicle through the invention. The likeliest similarity to this application from this prior art search appears in devices commonly known as **tow bars**. When my invention is employed, the combination of my towing device and the refuse container effectively becomes a trailer.

Generally **Class 414** includes **carrier** devices, but the searched prior art is inclusive of manual or motorized lifting elements that ultimately position the load so as to be borne by the vehicle.

Specific Patent Prior Art Commentary

Patent #5,860,659 CARRIER FOR HOLDING AND TRANSPORTING CONTAINERS U.S. CI. 280/405

Ref: ABSTRACT This prior art is included herein because it is focused on refuse containers. There is no actual area of overlap, in that my **invention is a link** between vehicle and a wheeled refuse container, rather than providing the wheels/wheeled cart for the refuse container.

Patent # 4,253,679 TRAILER HITCH CARRIAGE U.S. CI. 280/405 Ref: Col. 1 @ lines 5-10

This device serves as a link or towbar between the vehicle and the wheeled load. It also stabilizes the towed load. It draws its own stability from the vehicle hitch and its own wheels, rather than from the vehicle hitch alone.

My invention is inherently stable, resulting from direct fit with the vehicles hitch receiver. It requires no wheels. My link to the towed load is through a grabber hook, as opposed to a hitch ball.

Patent # US 6,341,795 B1 TRAILER HITCH COUPLING DEVICE U.S. CI. 280/490.1 Ref: Title

This device makes allowance for differing hitch ball heights when attaching a given trailer to a variety of vehicle trailer hitches, thus enabling the trailer itself to remain relatively level.

My device accommodates a variety of trailer hitch receiver elevations as well as a variety of refuse container heights, however it makes no claims regarding originality. It is not related to a hitch ball.

Patent #US 6,651,996 B1 SUPPORT STAND FOR A WHEELED VEHICLE U.S. CI. 280/402 Ref: Title

This prior art addresses a towbar device, mounted in a trailer hitch receiver, tows a wheeled load, and stabilizes the load being towed.

It is specific to towing a motorcycle. It has no accommodation for wheeled large refuse containers.

Patent #5,029,740 LUGGAGE RACK FOR VEHICLES U.S. CI. 224/42.01 Ref: Body of abstract

In this patent, wheels are attached to an outboard element of the towing device itself, rather than the towed load. After placement of the luggage (load), rotation of an interim element lifts both the load and the afore mentioned wheels off the ground.

This prior art device supports the entire units' weight when in use, rather than serving, as in my case, as an interconnection device between a wheeled object and a towing vehicle.

Patent #4,593,840 LOAD CARRYING UNIT U.S. CI. 224/42.03 Ref: Col. 1 @ line 5-7

This patent basically covers a specialized trailer and a complementary customized hitch. After securing the trailer to a vehicle hitch ball as well as the moment-loading support arm, the trailers' wheels can be raised off the ground. The load is ultimately cantilevered and supported exclusively by the vehicles' specialized hitch.

This prior art device supports the entire loads' weight, rather than serving, as in my case, as an interconnection device between a wheeled object and a towing vehicle.

Patent #5,826,768 VEHICLE MOUNTED CART U.S. CI. 224/486 Ref: Body of abstract

Here we have a wheeled cart, wherein the cart and its integral handle become structural elements when attached to a vehicle, those same elements are configured to work as cart and handle when in service off the vehicle. The two elements are permanently bound together via a pivoting joint.

The cart of this coupled combination is held off the ground when placed in service, being vertically supported by structural elements attached to the vehicle and the moment loading of the cart being restrained by a connection to an external spare tire mount.

This patented device supports the entire units' weight when in use, rather than serving, as in my case, as an interconnection device between a wheeled object and a towing vehicle.

Patent #6,000,594 RACK HITCH MOUNT U.S. CI. 224/519 Ref: Title and Abstract

This carrier device mounts directly in to a trailer hitch receiver. The focus of this patent defines a variety of locking clamp fits and/or clamp actuations. The preferred clamping method is one in which virtually no motion occurs between the clamp itself and the clamped members. The concept prevents "fretting" between the held elements.

This patent emerged during the prior art search because of the first statement in its abstract.

This patented device supports the entire units' weight when in use, rather than serving, as with my invention, as an interconnection device between a wheeled object and a towing vehicle.

Patent #US 6,485,243 B1 MOTOR VEHICLE LOAD CARRIER U.S. CI. 414/462 Ref: Title and Abstract

Load carrier as opposed to a load tow bar. Motorized rotation to allow access into the vehicle rear door.

This patent emerged during the prior art search because of the first statement in its abstract.

This patented device supports the entire units' weight when in use, rather than serving, as with my invention, as an interconnection device between a wheeled object and a towing vehicle.

Patent # 5,567,107 EXTRAVEHICULAR APPARATUS FOR LOADING AND SECURING CARGO U.S. CI. 414/462

Ref: Column 1, Line 15-18

This prior art is a device that does mount in a trailer hitch receiver and transport a cart.

This patented device supports the entire units' weight when in use, rather than serving, as in my case, as an interconnection device between a wheeled object and a towing vehicle.

Patent #5,810,542 LOAD SECURING DEVICE FOR A VEHICLE AND METHODS OF CONSTRUCTING AND UTILIZING SAME U.S.CI 414/462 Ref: ABSTRACT

This device is suitable to act as a carrier for transporting a load, off the ground, such load being carried on its "object engaging member". It additionally provides a suitable mount for a hitch ball, allowing simultaneous transport of a carried load while towing a trailer.

In neither application does it serve as a dedicated towbar, specific to wheeled refuse containers.

BACKGROUND OF THE INVENTION

5 This invention relates generally to vehicle attachments, in particular to a towing device enabling a user to easily move a large, wheeled refuse container from loading location to curbside pickup point.

An emerging trend in home or small business refuse and recycling collection involves the use of trucks that are equipped with hydraulic gripper arms that grasp specifically configured large,
10 wheeled refuse containers. These arms are arranged to lift the containers to a dumping level within the body of the truck, dump them, and return them empty to the curbside. The waste industry refers to this collection method as "Automatic Refuse Collection". This method increases the efficiency of the collection process.

Generally speaking, these large, wheeled refuse containers are substantially larger than
15 traditional 30-gallon metal trashcans, being typically 60 to 100 gallons in volumetric capacity. These large refuse containers are usually arranged with at least a pair of wheels, allowing them to be tipped onto the wheels and while so balanced, manually moved by the user. These large wheeled containers are able to handle heavy loads, having weight capacities ranging as high as 350 pounds.

20 When a large refuse container is heavily loaded, it is likely to become unwieldy to physically maneuver in some instances. In hilly conditions, gravel or dirt driveways, for frail users, in black ice and/or snow conditions, or combinations of these conditions the prospect of moving the container from loading location to curbside may become humanly difficult, if not impossible.

This device facilitates the transfer of the large wheeled refuse containers by minimizing the
25 physical effort required. Anyone having or having access to a vehicle with standard trailer hitch receiver can employ this device to use the power and stability of that vehicle to re-position the container from load point to pickup point. While this device provides a structural aspect when acting as a link between vehicle and wheeled trash cart, and displays load-handling characteristics when in use, it does not actually support the load directly, only

stabilizes it when in operation.

In order to provide background information so that the invention may be completely understood

35 and appreciated in its proper context, reference is made to a number of prior art patents. A
myriad of labor saving and/or helpful vehicle attachments are represented that carry an external
load, or pull a load, or lift a load.

Patents Numbered 4,593,840; 5,029,740; 5,826,768; 6,000,594; and US 6,485,243 B1 are prior art

40 wherein the device supports the full weight of a load and transmits it to the associated vehicle.

Patents Numbered 4,253,679; 5,810,542; and US 6,341,795 B1; define prior art wherein the device
augments the functionality of a vehicle mounted hitch.

45 Patent Number US 6,651,996 B1 shows a device to tow a wheeled vehicle, and is specific to the towing
of a motorcycle.

Patent Number 5,860,659 defines a device for moving trash containers and is specific to manually
moving them

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Patent Number 5,567,107 provides for transport of a wheeled vehicle via an attachment to a vehicles'
trailer hitch. The device does however support the full weight of a cart and transmits it to the
associated vehicle.